ABSTRACT OF THE DISCLOSURE

A multi-stage electric pump unit, having a multi-stage centrifugal pump with an electric motor coupled directly to the pump, where each stage consists of a pump, an impeller and a diffuser, which each have channels with vaned and vaneless zones. These zones are delimited by a shroud-surface and a hub-surface, where the b angle is the angle of the tangent at each point, and the Y-axis of the electric pump is the radial co-ordinate and X is the axial co-ordinate, for flow rates, Q, between 2500 and 8000 litres/minute. The points of the impeller and diffuser surface comply with the sixth degree polynomial equation, $Y=f(x) = Ax6 + Bx^5 + Cx^4 + Dx^3 + Ex^2 + Fx + G$. The constants of the equation for each part-zone of the diffuser and impeller are changed.